

REMARKS/ARGUMENTS

The present Amendment is in response to the Final Office Action having a mailing date of August 29, 2006. Claims 1-16 are pending in the present Application. Applicant has amended claims 1, 4, 13, 14, and 15. Applicant has also canceled claims 2-3. Consequently, claims 1 and 4-16 remain pending in the present Application.

Applicant has amended the specification to remove reference to a signal transmitted over the network. Applicant has amended claim 1 to incorporate the limitations of claim 3 and intervening claim 2. Applicant has amended independent claims 13, 14, and 15 to harmonize claims 13, 14, and 15 with independent claim 1. Applicant has also amended claim 4 to depend upon pending claim 1, rather than canceled claim 2. Accordingly, Applicant respectfully submits that no new matter is added and no new search is required.

This application is under Final Rejection. Applicant has presented arguments hereinbelow that Applicant believes should render the claims allowable. In the event, however, that the Examiner is not persuaded by Applicant's arguments, Applicant respectfully requests that the Examiner enter the Amendment to clarify issues upon appeal.

In the above-identified Office Action, the Examiner rejected claim 14 under 35 U.S.C. § 101, as being directed toward non-statutory subject matter. In so doing, the Examiner stated that claim 14 recites "a computer readable medium. . . Applicant has defined computer readable media to further encompass a non-statutory 'computer readable signal which . . . may be transmitted over a network.' . . . Signals are not statutory subject matter."

Applicant has amended the specification to remove reference to a signal transmitted over the network. Consequently, the remaining examples of computer readable media are a memory and

a CD-ROM. Accordingly, Applicant respectfully submits that claim 14 is allowable under 35 U.S.C. § 101.

In the above-identified Office Action, the Examiner rejected claims 3, 4, 5, and 10 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In so doing, the Examiner cited the term “latent bottleneck” in claim 3, “future bottleneck” in claim 4, “portion of the workload” in claim 10, and “memory using” in claim 5.

Applicant respectfully disagrees with the Examiner’s rejection of claim 3. Claim 3 does recite a “latent bottleneck”. However, the specification defines a latent bottleneck as one which will occur in a cluster when another, current bottleneck is cleared. Specification, page 6, lines 13-20 and page 10, lines 13-23. Consequently, Applicant respectfully submits that the terms in claim 3 are clear and definite.

Applicant respectfully traverses the Examiner’s rejection of claim 4. Claim 4 recites a “future bottleneck.” As currently presented, claim 4 also recites examples of future bottlenecks. The specification discusses forecasting future bottlenecks (i.e. a bottleneck which does not currently exist, but which may exist in the future) in the context of latent bottlenecks (which do not currently exist but may come into existence once another bottleneck is cleared) and impending cluster level bottlenecks (in which failure of a node in a cluster may cause a bottleneck). Specification, page 10, line 12-page 11, line 15 and Fig. 3, step 204. Consequently, Applicant respectfully submits that the terms in claim 4 are clear and definite.

Although the Examiner indicated in the Response to Arguments that the rejection of claims 5 and 10 was withdrawn, in paragraphs 15 and 18, the Examiner appeared to maintain the rejections of claims 5 and 10 under 35 U.S.C. § 112, second paragraph. Consequently, Applicant respectfully

reiterates arguments previously made. In particular, Applicant notes that Applicant has corrected claim 5 to recite "memory usage." Accordingly, Applicant respectfully submits that claim 5 is clear and definite. Applicant also notes that Claim 10 recites that a node of the plurality of nodes carries a workload and has a bottleneck. Claim 10 also recites that a companion node in the cluster is "capable of supporting a portion of the workload." Stated differently, the companion node can support part of the workload of the bottlenecked node. Thus, claim 10 recites that the cluster remedy is capable of including a notification that the portion of the workload can be moved to the companion node. Stated differently, one cluster level remedy is a redistribution of the workload such that other node(s) carry a part of the workload of the bottlenecked node. Such a situation is described in the specification, page 11, line 18-page 12, line 14. Furthermore, the specific amount (e.g. a percentage of the workload carried by the bottlenecked node) to which the "portion" corresponds may depend upon the particularities of the implementation, such as the workload carried by each node and the number of nodes in the cluster. Furthermore, Applicant notes that the words "portion of the workload" have plain meanings and no further explanation is required. According to the MPEP, "[w]here elements ... and processes, which are conventional and generally widely known in the field to which the invention pertains, form a part of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail." MPEP 601(g). Consequently, Applicant respectfully submits that the term "portion of the workload" is well understood by one of ordinary skill in the art and need not be further specified in the claim in order to apprise one of ordinary skill in the art of the scope of the invention.

The Examiner also rejected claims 1-3, 5-7, 10, and 12-16 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 6,434,626 (Prakash). In so doing, the Examiner cited col. 3, lines 2-

63 and col. 4, lines 21-33 and 47-65. In response to Applicant's argument regarding latent bottlenecks, the Examiner cited Prakash, col. 4, lines 52-55 in which Prakash indicates that it is determined whether the device is in a "healthy" mode.

Applicant respectfully traverses with the rejection. Claim 1 recites a method for providing performance analysis on a system including a cluster, which includes a plurality of nodes. The method includes dynamically obtaining data relating to monitors for the plurality of nodes in the cluster by sampling the plurality of nodes and dynamically analyzing the data to determine whether performance of the cluster can be improved. The method further includes providing at least one remedy to improve performance of the cluster if the performance of the cluster can be improved, the at least one remedy including a cluster level remedy. Claim 1 further recites that analyzing the data includes determining whether a latent bottleneck exists. As discussed above, a latent bottleneck is one which may exist once a current bottleneck is cleared. Claims 14 and 15 recite an analogous computer readable medium and an analogous system. Claim 13 recites an analogous method that further specifically accounts for computer systems not in the cluster.

Applicant agrees that Prakash indicates whether a device is "healthy" or "unhealthy". The cited portion of Prakash merely indicates that a "healthy" device is one which is error-free, while an "unhealthy" device is malfunctioning in some manner. Prakash, col. 4, lines 58-62. However, as described above, a latent bottleneck is not a current error. It is an error that will develop in a device if particular current bottleneck(s) are cleared.

Applicant agrees that it is possible that a device having a current bottleneck will be marked by Prakash as unhealthy. Such a current bottleneck may or may not have an associated latent bottleneck (a new bottleneck that will develop when the current bottleneck is cleared) for the same device or a different device. Either way, Prakash would mark the device having the

current bottleneck as unhealthy. Stated differently, Prakash's marking of a device having a current bottleneck as unhealthy would not depend upon whether or not a latent bottleneck also exists for the device. Conversely, Applicant has found no indication in Prakash that a potential (latent) bottleneck is considered in determining whether a device is healthy or ailing. Because a latent bottleneck is, by definition, a bottleneck that is currently not in existence (but would be if another bottleneck were cleared), a device could be considered healthy/error free even if a latent bottleneck exists. Thus, a device may be currently error free only because another bottleneck that is possibly on another device exists. Such a device may not be considered "ailing" by Prakash but may still have an associated latent bottleneck. Stated differently, Prakash would mark a device having a bottleneck as unhealthy regardless of whether a latent bottleneck also exists for the device, and may mark an unbottlenecked device as healthy regardless of whether a latent (possible future) bottleneck exists. Applicant has found no indication in Prakash that the existence of a latent bottleneck is specifically included in determining the health of a device. Thus, the determination of the health of a device need not inherently include determination of whether a latent bottleneck exists. Consequently, Prakash fails to teach or suggest the method, computer-readable medium, and system recited in claims 1, 13, 14, and 15. Accordingly, Applicant respectfully submits that independent claims 1, 13, 14, and 15 are allowable over the cited references.

Claims 5-7, 10, and 12 depend upon independent claim 1. Claim 16 depends upon independent claim 15. Consequently, the arguments herein apply with full force to claims 5-7, 10, 12, and 16. Accordingly, Applicant respectfully submits that claims 6-7, 10, 12, and 16 are allowable over the cited references.

Claim 5 specifies that the monitors for which data are dynamically obtained and analyzed include disk utilization, CPU utilization, memory usage and LAN utilization. The cited portion of Prakash merely indicates that a “healthy” device is one which is error-free, while an “unhealthy” device is malfunctioning in some manner. Prakash, col. 4, lines 58-62. Applicant respectfully submits that an indication of being “unhealthy” or malfunctioning could include any number of issues which may not be related to the recited monitors. Consequently, without more, Prakash fails to teach or suggest the method recited in claim 5.

Claims 6-7 and 10 recite various cluster-level remedies that may be provided if performance of the cluster performance can be improved. Applicant notes that, as discussed above, the portions of Prakash cited by the Examiner generally discuss the benefits of cluster architecture, not remedies that might be provided to enhance performance in response to dynamic analysis of data related to monitors in the cluster. Consequently, Prakash fails to teach or suggest the methods recited in claims 6-7 and 10.

Claims 12 recites a method that also includes obtaining information obtaining information relating to the cluster. This information specifically includes an indication of whether each of the plurality of nodes is a passive node, a maximum number of nodes in the cluster and a type of LAN adapter used for interconnecting the plurality of nodes. The portion of Prakash cited by the Examiner indicates that the responses to status messages include only two possibilities: healthy and unhealthy. Prakash, col. 4, lines 52-67. Consequently, the specifics relating to nodes of the cluster are not part of the information passed in response to status inquiries. Prakash thus fails to teach or suggest the method recited in claim 12. Accordingly, for the above-identified reasons, claims 5-7, 10, and 12 are separately allowable over the cited references.

The Examiner also rejected claims 4, 8-9, and 11 under Prakash in view of U.S. Patent No. 5,923,645 (Okuda).

Applicant respectfully disagrees with the Examiner's rejection. Claims 4, 8-9, and 11 depend upon independent claim 1. Consequently, the arguments herein with respect to Prakash apply with full force to claims 4, 8-9, and 11. Thus, Prakash fails to teach or suggest dynamically obtaining and analyzing data for a plurality of monitors in conjunction with providing a remedy, at least one of which may be a cluster level remedy and in which the analyzing data includes determining whether a latent bottleneck exists.

The cited portion of Okuda does mention predicting a bottleneck. However, the cited portion of Okuda is devoid of mention of cluster level remedies. Further, Applicant has found no mention of latent bottlenecks. Consequently, even if the ability to predict certain bottlenecks is added to the teachings of Prakash, the combination would still fail to teach or suggest the recited cluster level remedies and determination of whether a latent bottleneck exists. Furthermore, Applicant respectfully submits that any conclusion that Prakash in view of Okuda teaches or suggests the methods recited in claims 4, 8-9 and 11 involves improper hindsight. Applicant notes that one "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." In re Fine, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). See also In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). Consequently, claims 4, 8-9, and 11 are allowable over the cited references.

Moreover, claims 8-9 and 11 recite various cluster level remedies such as warning that if a node may become bottlenecked if another node in the cluster fails, indicating that a companion node may be a source of a bottleneck if another node is bottlenecked, and a notification that a node will become bottlenecked if another node fails. Applicant has found no mention in the

cited portions of Prakash or Okuda of such specific cluster level remedies. Consequently, any combination of the cited portions of Prakash and Okuda would also fail to teach or suggest such remedies. Accordingly, Applicant respectfully submits that claims 8-9 and 11 are separately allowable over the cited references.

In the above-identified Office Action, the Examiner also rejected claim 1 over claim 1 of U.S. Patent No. 6,434,613 (Bertram).

Applicant has provided herewith a terminal disclaimer disclaiming the portion of the term of a patent granted on the present application extending beyond the life of Bertram. Accordingly, Applicant respectfully submits that claim 1 is allowable over Bertram.

In the above-identified Office Action, the Examiner also rejected claim 1 over claim 1 of U.S. Patent No. 6,470,464 (Bertram II) on the grounds of statutory double patenting.

Applicant respectfully traverses with the Examiner's rejection. Statutory double patenting is same invention type double patenting. In this context same invention means identical subject matter. *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1984); *In re Vobel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Ockert*, 245 F.2d 467, 114 USPQ 330. Thus, "[w]here the claims of an application are not the "same" as those of a first patent, but the grant of a patent would unjustly extend the right granted by the first patent, a double patenting rejection under nonstatutory grounds is proper." MPEP 804.II (page 800-19). In addition, see MPEP 804.II (page 800-19).

Claim 1 recites:

1. A method for providing performance analysis on a system including a cluster, the cluster including a plurality of nodes, the method comprising the steps of:

dynamically obtaining data for the plurality of nodes in the cluster by sampling the plurality of nodes, the data relating to a plurality of monitors for the node,

dynamically analyzing the data to determine whether performance of the cluster can be improved, wherein the data analyzing step further includes the steps of

determining whether a bottleneck exists for at least one monitor of the plurality of monitors for the plurality of nodes, the determining including determining whether at least one latent bottleneck exists;

providing at least one remedy to improve performance of the cluster if the performance of the cluster can be improved, the at least one remedy including a cluster level remedy.

In contrast, claim 1 of Bertram II recites:

1. A method of analyzing performance of a computer system and for providing recommendations for changes in the system to improve its performance, the steps of the method comprising:

receiving and storing indicators of the performance of components of the computer system at periodic times;

applying stored rules to the stored indicators to analyze the performance of the computer system; project future performance of the computer system based upon past indicators;

detecting a projected undesirable condition of the computer system based upon the future performance projections based on past indicators;

in response to the detecting of an undesirable condition of the computer system, providing a recommendation to alleviate the performance of computer system by ameliorating the projected undesirable conditions of the computer system; and

analyzing the undesirable conditions to determine the most severe undesirable condition and reporting it first.

Bertram II thus recites detecting a projected undesirable condition based on future performance projections of past indicators and in response, providing a recommendation. There is no indication in claim 1 of Bertram II that any analysis is performed with respect to determinations made relating with respect to latent bottlenecks. There is also no indication that a recommendation provided must include a cluster level remedy. Consequently, the inventions as defined by claim 1 of the present application and claim 1 of Bertram are not the same. Claim 1 of the present application thus does not run afoul of statutory double patenting of claim 1 of Bertram II. Accordingly, Applicant respectfully submits that claim 1 is allowable over Bertram II.

Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

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